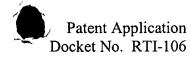


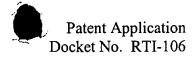
Claims

What is claimed is:

- 1. A biomedical implant designed for implantation into a spine of a patient comprising an elongated body having first and second ends, said elongated body being tapered such that tapering begins at a first position on or proximate to said first end and continues down the length of the elongated body down to a second position on or proximate to said
- 5 second end, wherein said implant is comprised of cortical, cortico-cancellous, or
- 6 cancellous bone.
- 2. The biomedical implant of claim 1 wherein said elongated body defines a substantially 1
- 2 dowel-like shape.
- 3. The biomedical implant of claim 1 wherein said first end comprises one or more 1
- 2 insertion holes formed into said first end such/that said insertion holes are oriented along
- the longitudinal axis of said biomedical implant, wherein said holes are configured to 3
- 4 engage a securing device.
- 4. The biomedical implant of claim 1 wherein said one or more insertion holes define a 1
- circular, triangular, quadrangle, pentagonal, hexagonal, heptagonal or octagonal shape, or 2
- 3 combination thereof, and said securing device comprises inserts configured to match the
- 4 shape of said insertion holes.
- 5. The biomedical implant of claim 1 wherein said first end defines a wedge shape for 1
- 2 engaging a securing device.
- 6. The biomedical implant ϕ f claim 4 wherein said wedge shape comprises two or more 1
- 2 substantially planar sections that are angled obliquely in relation to the exterior surface of
- 3 said elongated body.



- 7. The biomedical implant of claim 4, wherein said wedge shape corresponds to the
- 2 natural architecture of the bone from which said biomedical implant is made.
- 1 8. The biomedical implant of claim 1, wherein said first end has two or more pinch cut
- 2 outs formed thereon.
- 9. The biomedical implant of claim 1, wherein said implant comprises a channel formed
- 2 through said elongated body such that said channel is positioned transverse to the
- 3 longitudinal axis of said implant, said channel being adapted to have a biologically active
- 4 substance disposed therein.
- 1 10. The biomedical implant of claim 1, wherein said first end defines a peg portion
- 2 extending longitudinally therefrom, said peg portion configured to engage a securing
- 3 device.
- 1 11. A biomedical implant designed for implantation into the spine of a patient
- 2 comprising two or more separate sections that/are configured such that said two or more
- 3 separate sections can be joined together, wherein upon said two or more separate sections
- 4 being joined, an implant is formed comprising an elongated body having a first and
- 5 second ends, said elongated body being tapered such that tapering begins at a first
- 6 position on or proximate to said first end and continues down the length of the elongated
- 7 body down to a second position on or proximate to said second end.
- 1 12. The biomedical implant of claim 11, wherein said implant is comprised of cortical,
- 2 cortico-cancellous, or cancellous bone, or a combination thereof.
- 1 13. The biomedical implant of claim 11, wherein said two or more sections comprise
- 2 joining holes formed therein such that said two or more sections are joined together by
- 3 insertion of pins through/said joining holes.



- 1 14. The biomedical implant of claim 13, wherein said pins are comprised of cortical
- 2 bone.
- 1 15. A method of producing a biomedical implant that comprises an elongated body
- 2 having a first and second ends wherein said first end comprises two or more oblique
- 3 sides, said method comprising obtaining a bone having a ridge naturally formed thereon
- 4 and excising bone block sections from said bone at an angle substantially perpendicular
- 5 to said ridge.
- 1 16. The method of claim 15, wherein said bone is selected from a bone selected from the
- 2 group consisting of femur, tibia, fibula, humerus, radius and ulna.
- 1 17. The implant according to claim 1 comprising a plurality of/holes formed therein,
- 2 optionally connecting to a central channel formed in said implant, to aid in delivery of a
- 3 biologically active substance disposed on or within the implant to surrounding tissue.
- 1 18. The implant of claim 17 wherein said biologically active substance comprises one or
- 2 more substances selected from the group consisting of cells, growth factors, antibiotics,
- 3 nucleic acids, proteins, peptides, antineoplastics, and anti-inflammatory compounds.
- 1 19. The implant according to claim 1 formed substantially from human, allograft cortical
- 2 bone or xenograft bone.
- 1 20. A method of treating a defect or injury to the spine comprising obtaining a
- 2 biomedical implant, said biomedical implant comprising an elongated body having first
- and second ends, said elongated body being tapered such that tapering begins at a first
- 4 position on or proximate to said first end and continues down the length of the elongated
- 5 body down to a second position on or proximate to said second end, wherein said implant
- 6 is comprised of cortical, cortico-cancellous, or cancellous bone; and implanting said
- 7 implant into a location in the spine to effect support at that location.

- 1 21. The method of claim 20, wherein said biomedical implant comprises two or more
- 2 sections joined together.
- 1221. The method of claim 20, wherein said implant comprises a channel formed through
- 2 said elongated body such that said channel is positioned transverse to the longitudinal
- axis of said implant, said channel being adapted to have a biologically active substance
- 4 disposed therein.
- 12322. A method for fusing vertebrae which comprises making a space between the
- 2 vertebrae to be fused, and inserting into said space a biomedical implant, said biomedical
- 3 implant comprising an elongated body having first and second ends, said elongated body
- 4 being tapered such that tapering begins at a first position on or proximate to said first end
- 5 and continues down the length of the elongated body down to a second position on or
- 6 proximate to said second end, wherein said implant is comprised of cortical, cortico-
- 7 cancellous, or cancellous bone.